ABSTRACT

We report an 86-year-old woman with an obturator hernia presenting with recurrent right hip pain. Obturator hernia is a diagnostic challenge because the hernial mass is usually concealed beneath the pectineus. It should be suspected in emaciated, multiparous, elderly women presenting with unexplained pain in the groin, hip, thigh, or knee. High levels of clinical suspicion of the high-risk patients and recourse to investigation by computed tomography are important, as delay in diagnosis and treatment is associated with increased morbidity and mortality.

Key words: frail elderly; hernia, obturator; pelvic pain

INTRODUCTION

Obturator hernia is a rare entity, accounting for 0.05% to 0.14% of all hernias. Bilateral obturator hernias account for only 0.013% of all hernias. Its incidence is estimated to be <1% worldwide and 1.6% in Asian populations. It is more commonly encountered in emaciated, multiparous Asian elderly women (aged 70 to 90 years) than others.

Its symptoms vary and are non-specific; 90% of patients present with acute small-bowel obstruction. Other presentations include pain along the medial thigh, a palpable mass in the upper part of the medial thigh, intermittent abdominal pain, and repeated episodes of bowel obstruction that resolve without intervention. Its diagnosis is often delayed or missed, which results in high rates (25–100%) of bowel strangulation. The mortality from complicated obturator hernia is reported to be 12% to 70%.

Obturator hernia is one of the differential diagnoses of hip pain, particularly in thin, multiparous elderly women presenting with unexplained pain in the groin, hip, thigh, and/or knee. We report an 86-year-old woman with an obturator hernia presenting with recurrent right hip pain.

CASE REPORT

In July 2011, an 86-year-old woman presented with
a 2-year history of recurrent episodes of right hip dull pain. She could ambulate well with the aid of a stick, but had difficulty in walking during attacks of pain, which typically lasted 15 minute to 1 hour. The pain was relieved when she laid flat on a bed. She had had multiple admissions to the accident and emergency department because of the pain, for which she received intramuscular analgesics. She was diagnosed to have muscle cramps, referred pain from lumbar spondylosis, or non-specific right hip pain. She had a history of chronic constipation. She had undergone 5 vaginal deliveries and 3 abortions, but no abdominal surgery.

The patient weighed 33 kg and was 135 cm in height (body mass index, 18.1 kg/m²) and had thoracic kyphosis (Fig. 1a). She was generally well and apyrexial. Her abdomen was soft and non-tender on palpation, and there was no cough impulse over both groins. There was mild tenderness and swelling over the anterior aspect of the right groin (Fig. 1b). The hip was not irritable on passive movement, but the end of the range of hip movement was restricted by pain, especially in flexion with internal rotation. The complete blood count and serum biochemistry results were normal. Radiographs of the pelvis showed no fracture but slightly dilated loops of small bowel (Fig. 2). Computed tomography (CT) of the right hip revealed no fracture, but there was a low-density, round mass of 2.2x2.8x3.2 cm between the right pectineus and right obturator externus (Fig. 3), suggesting an obturator hernia. She had repeated vomiting after CT, and emergency laparotomy and hernia repair was offered. However, the patient refused surgery despite having the risk of bowel incarceration explained. The vomiting and the right hip pain subsided after best rest, and the patient was discharged from hospital.

**DISCUSSION**

The obturator foramen, lying between the ischium and the pubis, is the largest aperture in the skeleton—apart from a small area that is covered by the obturator membrane. Its upper margin is formed by the superior ramus of the pubis. The body and inferior ramus of the pubis forms the interior margin, whereas its lower margin is formed by the ramus of the ischium and the anterior border of the body of the ischium. An obturator hernia contains viscera herniated through the obturator canal, an obliquely oriented rigid osteofibrous tunnel measuring 2 to 3 cm in length and 1 cm in diameter, through which the obturator vessels and nerve pass to reach the hip. The obturator nerve enters the thigh after passing through the obturator canal and divides into an anterior and a posterior branch, which are separated at first by some of the fibres of the obturator externus, and lower down by the adductor brevis. The obturator nerve is responsible for the sensory innervation of the skin of the medial aspect of the thigh. It is also responsible for the motor innervation of the adductor muscles of the lower extremity (obturator externus, adductor longus, adductor brevis, adductor magnus, gracilis) and the pectineus. Notably, it is not responsible for innervation of the obturator internus, despite the similarity in name.

There are 3 stages in the formation of an obturator hernia. In the first stage, preperitoneal connective
tissue and fat enter the obturator canal. In the second stage, a dimple is formed in the peritoneum over the internal orifice of the obturator canal and progresses to invagination of a peritoneal sac. In the third stage, viscera, generally ileum, enters the sac.5,7,9 The contents of an obturator hernia are most commonly situated between the pectineus and the obturator externus, followed by the superior and medial fascicules of the obturator externus, and the obturator externus and obturator internus.9,10

Its aetiology and pathogenesis is due to the loss of the protective cushion of preperitoneal fat or lymphatic tissue that occupies the obturator canal, as a result of ageing and/or malnutrition. This leads to increased space around the obturator nerve and vessels. The predilection for females is due to their relatively wider pelvises after pregnancies and a more oblique and wider obturator canal.6,7,11,12 Other conditions (chronic constipation, chronic lung disease, ascites, kyphoscoliosis) and multiparousity also predispose to herniation by increasing intra-abdominal pressure and relaxing the peritoneum.13,14 Our patient presented with most of these predisposing factors. The right side is more commonly affected, as the sigmoid colon covers the left obturator foramen. Up to 50 to 60% of patients present with partial bowel obstruction known as Richter hernia. The hernia usually contains small bowel (ileum rather than jejunum); far less commonly it contains the colon (cecum or sigma), appendix, greater omentum, Meckel’s diverticulum, gallbladder, urinary bladder, or gynaecological adnexa.5

Symptoms of obturator hernia vary and are non-specific. 90% of patients present with acute small-bowel obstruction. Other presentations include pain at the base of the thigh, a palpable mass in the upper part of the medial thigh, intermittent abdominal pain, and repeated episodes of bowel obstruction that resolve without intervention.2 Some patients present with thigh neuralgia only or as coxofemoralgia.16 Vaginal examination may yield a mass at either the 2 or 10 o’clock position in the obturator area. There may be ecchymoses in the upper medial thigh secondary to effusion from strangulation.8 Patients may present with pain in the groin, thigh, knee, or hip owing to compression of the obturator nerve by the hernia, which gives rise to the Howship-Romberg sign. The pain can be exacerbated by extension, abduction, or internal rotation of the thigh, whereas flexion usually relieves it. The Howship-Romberg sign is present in 15 to 50% of obturator hernias, but is not pathognomonic and is often mistaken for arthritis.7 Because hip pain is a common complaint in elderly patients, the Howship-Romberg sign is often overlooked or misinterpreted,14,17 and patients are usually referred to orthopaedic surgeons. Furthermore, if incarceration of the intestine develops, the severe intra-abdominal symptoms generally mask the less acute symptoms.

Figure 3  (a) Transverse and (b) sagittal computed tomography of the right hip showing a low-density, round mass of 2.2x2.8x3.2 cm (circle) between the right pectineus and obturator externus suggestive of obturator hernia.
REFERENCES